

## CALCULATION OF RADIATION EMITTED BY A COMPUTER SYSTEM

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### 5 ABSTRACT OF THE DISCLOSURE

10 The invention relates to a method for calculating electromagnetic radiation emitted by  
a computer system. The method models the characteristic radiation from a central processing  
unit as a modulated Gaussian pulse. The method solves Maxwell's equation using finite  
differences in the time domain. After solving Maxwell's equation the method determines if  
the radiation emitted by the heat sink is capacitively coupled to the radiation emitted by the  
remaining components of the computer system. The method also determines whether  
radiation emitted by the heat sink is inductively coupled to the radiation emitted by the  
remaining components of the computer system. Finally, the method uses a fast Fourier  
transform to translate time domain data to the frequency domain. The method also teaches  
15 using a computer system, with instructions coded on a computer readable medium to make  
the calculations described.